

REMARKS/ARGUMENTS

In this Amendment, Claims 1, 27 and 33 have been amended. Further, Claim 34 has been canceled without prejudice. Accordingly, after entry of this Amendment, Claims 1-7, 9-31, 33, 43-46 are pending in the application.

Reconsideration of this Application and entry of this Amendment after Final are respectfully requested. The proposed amendment places the claims in better form for appeal. Additionally, this amendment addresses items brought up by the examiner in the final office action. In view of the amendments and following remarks, favorable consideration and allowance of the application is respectfully requested.

Election/restrictions

Claims 2-7, 9-19, 33 stand withdrawn. Applicant hereby requests reinstatement, consideration and allowance of Claims 2-7, 9-19 as being dependent from generic Claim 1.

Further, Claim 33 has been amended to be direct towards the elected species I that includes figures 1-3. Accordingly, Applicant hereby requests reinstatement and consideration of Claim 33 and allowance of Claim 33 for reasons similar to those set forth below regarding Claim 1.

Claims 1, 20-25, 27-30, and 43-46 are patentable over Monroe et al. (6,113,608) in view of Rife (5,741,288).

The Examiner states:

Monroe et al. disclose ... a stent delivery system including **a housing (ref. 124, fig. 1)**, a sheath (ref. 112, Fig. 1), **a slider (ref. 120, Fig. 1 by ref. 104, Fig. 1)**, **an engagement plate (ref. 164, Fig. 1)**, a source of stored energy being **a spring (ref. 160, Fig. 1 acts like a spring)**, an anchor plate (above ref. 136, Fig. 1), ... **means for connecting the slider to the engagement plate (through ref. 104, fig. 1) ...** (Office Action, page 3, emphasis added.)

Accordingly, the Examiner asserts that the pull collar 164 of Monroe et al. is an engagement plate. Applicant notes that the “engagement plate” 164 is spaced apart from the housing 124, and the Examiner has failed to callout how the “engagement plate” 164 is coupled to the housing 124 or located within the housing. Further, as the “engagement plate” 164 is moveable relative to the housing 124, Applicant respectfully submits that Monroe et al. actually

teaches away from the “engagement plate” 164 being coupled to the housing 124. More particularly, Monroe et al. teaches:

Retraction device 116 includes **a moveable piston 120 within a piston housing 124**, piston 120 separating first portion 128 of piston housing 124 from second portion 132 of piston housing 124. First portion 128 of housing 124 is distal to second portion 132 of piston housing 124. Piston 120 is proximal to retractable sheath 112. **A connecting member 136 also extends from piston 120 to pull collar 164 which is connected to retractable sheath 112 so that movement of the piston will result in an associated movement of the retractable sheath.** Piston 120 is actuated by the supply of a fluid to first portion 128 of piston housing 124. (Col. 3, lines 22-34, emphasis added.)

Further, as set forth above, the Examiner asserts that the piston 120 of Monroe et al. is a slider and the pull collar 164 of Monroe et al. is an engagement plate. Applicant notes that the piston 120 is connected to the pull collar 164 by a connecting member 136, which maintains the relative spacing between the piston 120 and the pull collar 164. More particularly, Monroe et al. teaches:

A connecting member 136 also extends from piston 120 to pull collar 164 which is connected to retractable sheath 112 so that movement of the piston will result in an associated movement of the retractable sheath. ... The connector element may be **a wire or a rod** made of a suitable metal such as stainless steel or a polymeric material. Where the device is to be operated in push mode, the connector element should be relatively incompressible and buckle resistance under a compressive force. Where the device is to be operated in pull mode, the connecting member can be made of any suitable material having a tensile strength so that the connecting element does not deform or break under tension. (Col. 3, lines 29-32; Col. 7, lines 20-28, emphasis added.)

Accordingly, Monroe et al. teaches that the spacing between the piston 120 (asserted to be the “slider” by the Examiner) and the pull collar 164 (asserted to by the “engagement plate” by the Examiner) is fixed by the connecting member 136 thus preventing contact between the piston 120 and the pull collar 164.

As noted above, the Examiner asserts “a source of stored energy being **a spring (ref. 160, Fig. 1 acts like a spring)**”, emphasis added. In contrast, Monroe et al. teaches: ... the inventive medical device delivery system further comprises an **accordion-like collapsible sheath 160** between piston housing 124 and medical device mounting region 108, as shown in FIGS. 1-4. (Col. 7, lines 29-33, emphasis added.)

Thus, in contrast to the Examiner's assertion that the sheath 160 is a spring, Monroe et al. teaches that the sheath 160 is **collapsible**.

For at least the above reasons, Monroe et al. does not teach or suggest:

A delivery system comprising:
a housing;
a sheath;
a slider coupled to said sheath, said slider being located within said housing;
an engagement plate located within said housing, said engagement plate coupled to said housing by at least one breakaway, wherein retraction of said slider causes **said slider to directly contact and connect to said engagement plate**; and
a source of stored energy coupled to said engagement plate,

as recited in amended Claim 1, emphasis added.

Rife does not cure this glaring deficiency in Monroe et al. Accordingly, Claim 1 is allowable over Monroe et al. in view of Rife. Claims 20-25, 44-45, which depend from Claim 1, are allowable for at least the same reasons as Claim 1.

For similar reasons, Monroe et al. in view of Rife does not teach or suggest:

A method comprising:
manually retracting a slider coupled to a sheath to initiate deployment of a stent;
wherein said manually retracting further comprises **causing said slider to directly contact and become connected to an engagement plate**; and
wherein said manually retracting further comprises disengaging said engagement plate from a housing to complete deployment of said stent, said disengaging comprising breaking at least one breakaway coupling said engagement plate to said housing,

as recited in amended Claim 27, emphasis added. Accordingly, Claim 27 is allowable over Monroe et al. in view of Rife. Claims 28-30, 43, 46, which depend from Claim 27, are allowable for at least the same reasons as Claim 27.

For the above reasons, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Claims 26, 31 are patentable over Monroe et al. in further view of Von Oepen et al. (2006/0142833).

The Examiner admits:

Monroe et al. **do not disclose using the breakaway element.** (Office Action, page 3, emphasis added.)

Accordingly, Monroe et al. does not teach or suggest:

A delivery system comprising:
a housing;
a sheath;
a slider coupled to said sheath, said slider being located within said housing;
an engagement plate located within said housing, **said engagement plate coupled to said housing by at least one breakaway**, wherein retraction of said slider causes said slider to directly contact and connect to said engagement plate;
and
a source of stored energy coupled to said engagement plate,

as recited in amended Claim 1, emphasis added. Accordingly, Claim 1 is allowable over Monroe et al. Claim 26, which depends from Claim 1, is allowable over Monroe et al. for at least the same reasons as Claim 1.

The Examiner has failed to callout how Von Oepen et al. cures this glaring deficiency in Monroe et al. Accordingly, Claim 26 is allowable over Monroe et al. in view of Von Oepen et al.

Further, the Examiner states:

Von Oepen et al. teach locking protrusions and locking apertures ... for the purpose of **locking the slider to the engagement plate.** (Office action, page 4, emphasis added.)

However, as set forth above, Monroe et al. teaches that the spacing between the piston 120 (asserted to be the “slider” by the Examiner) and the pull collar 164 (asserted to by the “engagement plate” by the Examiner) is fixed by the connecting member 136 thus preventing contact between the piston 120 and the pull collar 164. Accordingly, Monroe et al. teaches away from “locking protrusions and locking apertures ... for the purpose of locking the slider to the engagement plate” and one of skill in the art would not combine Monroe et al. with Von Oepen et al.

For at least this additional reason, Monroe et al. in view of Von Oepen et al. does not teach or suggest:

The delivery system of Claim 1 wherein said **slider comprises locking protrusions** and said **engagement plate comprises locking apertures aligned with said locking protrusions**,

as recited in Claim 26, emphasis added. Accordingly, Claim 26 is allowable over Monroe et al. in view of Von Oepen et al.

For similar reasons, Monroe et al. in view of Von Oepen et al. does not teach or suggest:

The method of Claim 27 wherein said connecting comprises **snapping locking protrusions of said slider to said engagement plate**,

as recited in Claim 31, emphasis added. Accordingly, Claim 31 is allowable over Monroe et al. in view of Von Oepen et al.

For the above reasons, Applicant respectfully requests reconsideration and withdrawal of this rejection.

Conclusion

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. The Commissioner is hereby authorized to charge any additional fees which may be required under 37 C.F.R. 1.17, or credit any overpayment, to Deposit Account No. 01-2525. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at telephone (707) 566-1888.

Respectfully submitted,

/Janis J. Biksa, Reg. No. 33,648/

Janis J. Biksa

Registration No. 33,648

Attorney for Applicant

Medtronic Vascular, Inc.
3576 Unocal Place
Santa Rosa, CA 95403
Facsimile No.: (707) 543-5420